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ABSTRACT

This narrative depicts how one university utilized doctoral interns to aid in the transition of a student management system from manual to computerized student records. Findings included the statement that the benefits gained from a computerized student records system outweigh the pain of the conversion process for all personnel using the student system. Appended are recommendations, tables of interview summaries with elementary principals, and several sample computer data screens. (SI)

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A COOPERATIVE ADMINISTRATIVE STUDY: USING DOCTORAL INTERNSHIPS TO ACCELERATE THE TRANSITION FROM MANUAL STUDENT RECORDS TO COMPUTERIZED RECORDS

A Paper for Presentation

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A COOPERATIVE ADMINISTRATIVE STUDY: USING DOCTORAL INTERNSHIPS TO ACCELERATE THE TRANSITION FROM MANUAL STUDENT RECORDS TO COMPUTERIZED RECORDS

INTRODUCTION

Making a doctoral intern's field experience more meaningful has been a concern of the Department of Supervision and Administration faculty members at East Tennessee State University. Placement in county and city school superintendents' offices, the State Department of Education, community colleges, private colleges, public universities, and the local educational cooperative has proven to be beneficial to the individual.

Through creative efforts the internship in the graduate program at the university can be used to help with the installation or implementation of vendor software in a public school system. Vendor software is defined as a system or set of programs purchased from a company to perform specific tasks. The expertise of the intern and the approved written objectives will be factors in determining the level of involvement. If your college or university is not currently involved in a joint venture between the internship program and the public schools, you may be missing a golden opportunity of valuable practical experience for the graduate students and an excellent "free" human resource for the public schools (Sutton, Seibel, & Redfield, 1985). The internships are generally doctoral level students with previous experience in educational areas or

administration/management positions. Also many universities offer programs at the Master's level in various areas of computer science that need practical applications for problem assignments. If the coordinator is resourceful and imaginative, interns may be assigned to an entire project; from the design or decision stage through installation and implementation. This can only be accomplished by a very close alliance with the superintendent and administrative staff of the public school system and departmental faculty from the university. When areas of need are determined and the abilities of the interns are known, it is easy to match competencies and make plans that exceed one or two university terms.

The faculty coordinator of the internship program would welcome a "bank" of possible internships (jobs) that could be readily assigned. One of the keys to making this system work is to keep the job bank current, and this can be done by staying in close contact (monthly or quarterly) with the public school systems in the service area of the university.

THE PROJECT

This narrative depicts how one university utilized doctoral interns to aid in the implementation process of a student management system for a public school system and provided a very meaningful experience for the interns. The Department of Supervision and Administration faculty had recently developed a new doctoral program for individuals who do not plan to work in the public school system and would not require certification.

This doctoral program has been attractive to people from the public sector such as higher education, government, public utilities, and health services. The majority of these students hold mid-level management and administration positions. This program opened a whole new area of talent that is now available for internship assignments.

One student asked to be assigned to the local city public school system because of two presentations in separate classes by the school superintendent. The student was impressed by the frankness and positive manner the superintendent approached the issues under discussion and felt a work assignment under this management style would be a beneficial learning experience.

The internship program required the intern to prepare written objectives before the interview with the superintendent and the beginning of the assignment. The student/intern and faculty internship coordinator met with the superintendent to evaluate the objectives. They were revised after this meeting to include areas requested by the superintendent. At the beginning of the internship, the major objective of the intern was to develop a cost model that could be used in various ways (by school, by grade, by course) to aid the school system in making budget decisions or answering questions by the public as to why education is so expensive. The intern had considerable experience in cost models and data reporting on staffing, students, physical facilities and graduation rates at the higher

education level as well as ten years in operations management in a computer center.

HOWEVER, the intern's understanding of such statements as "student records are on the computer", soon proved to have VERY different meanings in the public school system as contrasted to higher education. The intern discovered that the student data base was very incomplete. In fact, only three schools in the system had terminals, with two of these schools using the system for scheduling and grading; essential components of a student module. (To use the system for these functions, it was necessary to build nine basic data items for each student using the Master Student Record screen - Exhibit A.) The third school had entered the basic data required to make a record for one classroom in the school.

With the new understanding of the status of the current system, the intern changed the major objective and began to "dig" into the vendor software system manuals and questioned everyone who seemed to have a need for the student data base.

The system was designed with only one predefined screen for entering the student demographic information (Exhibit A). There were six other undefined screens available. This is an advantage as the school system can define the elements needed. These six screens had to be defined by the user and data entered to get the full benefits of the system. The software would operate with only the nine required data items noted on the predefined screen. This is also a useful system feature, and the software can be

used quickly for very beneficial functions (scheduling and grading) without entering large amounts of information.

The intern analyzed the six undefined screens; a medical screen, special education screen, testing screen, optional information screen, career screen, and vocational education screen. From the names of the screens, it was apparent that two of the screens were for high school and possibly middle school or junior high, and the other four screens would be used by all three school levels. Each screen was blank with the exception of the number of the data items that could be defined and the length of the description and the data value (Exhibit B). For example, the medical screen could have up to 30 data items, the description of that item could be up to 15 digits in length, and the data value (what would be entered into the system) could be up to 8 digits in length.

The medical screen was chosen as a starting place because all students would have this screen, and fewer people were involved in the screen definition. The school nurses were the contacts for defining the needed information on the medical history of the students. Meetings were arranged at two of the schools to review the current medical record and to explain what was available in the new system. Neither nurse had used a terminal before and had little knowledge as to the data gathering process and management of data for a computerized system. However, a major point was observed by the intern, both nurses were very interested in learning about the process. Once they

had a "little" information they opened up with many very perceptive questions. Both were excited about the idea of putting the records on-line. It was extremely easy to work with them on defining the data elements and values.

When the initial meeting was complete an attempt was made to define the blank screen. A "code definition sheet" (Exhibit D) was prepared to aid in consistent data entry and with the intent that it would become part of a user's manual for each school and each terminal. When the "test" screen (Exhibit C) was finished and the draft copy of the code definition sheet typed, a meeting was scheduled at the elementary school with one class on-line. The people utilized for the test were the two nurses, the intern, and the school principal. This meeting was to "test" the screen using actual medical record cards and data.

During the test the intern keyed (entered) the first record explaining very clearly and slowly each step in the process. After this record was entered, one of the nurses did the entering. (This was the first time either one of them had touched a terminal.) The intern "talked" the nurse through the next two records while making notes about questions and observing behavior. The fourth record was entered by the nurse without help. This worked very well and the look on the nurse's face was fantastic. This process was helpful in anticipating reactions from the users in the other schools. All problems and questions were noted by the intern because information for the screen was not available on one source document. The test established that

some of the data values defined were not values the nurses would want, and some of the values were difficult to enter. A number of the data elements were not placed according to the medical record card; in other words, the person entering the data had to search the card to find the information to be entered. Finding these problems areas is the major purpose of the test run. Only four records were entered during the test which was ample for this screen as each item was tested. However, this was not enough records for testing the other screens.

The noted changes were made in the medical screen and the code definition sheet. The final screen was entered in the system for the elementary, middle, and high schools. The nurses and their secretary were scheduled to enter an entire classroom. Once this was done the medical screen was considered complete.

The same process was followed for the other five screens. However, because more people were involved with the definition of these screens, the procedure took longer. By the end of the internship, all six screens had been defined and four had been tested.

A major problem noted by the intern during the process was the reluctance and hesitation of the principals in the system to push for a computerized on-line record. It was a classic example of the fear of change and not understanding or seeing the benefits of a computerized system (Weintraub, 1985; Marcum, 1987). Because of this observation, the superintendent accepted another intern the following term to interview the principals and

discuss their fears and perceptions of the system. This intern had considerable experience in working with computer systems in a public school setting and could relate specifically the benefits of such a system. Each interview was summarized and submitted to the superintendent for further use in making the system totally operational. Table 1 summarizes the interviews with the elementary principals and Table 2 suggest recommendations to speed the total implementation process based on the intern's perceptions during the interviews.

FINDINGS AND RECOMMENDATIONS

A doctoral internship can be rewarding. Combining theory and practice provides participants with a positive experience. Those who are exposed to the practical experiences may very well conclude that actual implementation of a higher education proposal in an organization can add immeasurable to their knowledge base.

Change in almost all areas, but particularly in education, comes slowly and sometimes creates conflict between and among individuals and groups. However, the benefits gained from a computerized student records system outweigh the pain of the conversion process for all personnel using the student system; and the reporting function should be more accurate and easier to accomplish.

Table 1

SUMMARY OF INTERVIEWS WITH ELEMENTARY PRINCIPALS

Concerns	Number Responses
Training	4
Original Data Entry	4
Data Entry File Maintenance	4
System Response Time	3
Tennessee Attendance Program	5
Who Enters Teacher's Grades	4
Number Terminals Per School	1
Additional Phone Lines	1
Historical Data	1
Testing Scores	1
Duplication of Data	1
Networking	4

Note: Intern interviewed seven of the nine elementary principals.

Table 2

RECOMMENDATIONS

1. Provide short in-service training sessions with each school working with their own student data.

2. Install hardware in all schools as soon as possible.

3. Training should be introduced one data module or screen at a time.

4. Use existing paraprofessionals for the initial data entry.

5. Decide on a consistent student scheduling and numbering system that meets the needs of all the schools in the system.

6. If present software cannot be revised to meet the needs of the Tennessee Attendance Program, other alternatives need to be made immediately.

7. Designate one or two people at the central office as the resource person for the schools to contact when problems arise with the software or system.

ANYTOWN PUBLIC SCHOOL
STUDENT MASTER RECORD

	STUDENT # XXXXXX	**	SCHOOL XXX
**	CLASS YEAR . . . XX		PHONE . . . . . .XXX-XXXX
**	STUDENT NAME . . . AAAAAAAA AAAAAAA		BIRTHDATE XXXXXX
	ADDRESS . . . . . .XXX AAAAAAAAAAAAA	**	CITY CODE XXXXX
	MAILING ADDRESS . . XXX AAAAAAAAAAAA		CITY CODE XXXXX
**	GUARDIAN/PARENT . . . AAAAAAAAAAAA		
**	SEX . . . . . .A		HOME LANG . . . . .
	COUNSELOR XXX		ETHNIC . . . . .
	FATHER.		PHONE . . . . . .XXX-XXXX
	FATHERS EMPLR . . .		BUSINESS . . . . .XXX-XXXX
	MOTHER		PHONE . . . . . .XXX-XXXX
	MOTHERS EMPLR . . .		BUSINESS . . . . .XXX-XXXX
	EMERGENCY		PHONE . . . . . .XXX-XXXX
	DOCTOR		PHONE . . . . . .XXX-XXXX
**	ENTRY DATE . . . . . MMYY	**	ENTRY CODE XX
	WITHDR DATE . . . .. MMDDYY		WITHDR CODE . . . XX
**	ATTEND REGISTER . . XXX		CURRICULUM XXXX
	NO. OF PERIODS		

** REQUIRED (MINIMUM DATA ENTRY REQUIRED BY THE SYSTEM)

Exhibit A

11

ANYTOWN PUBLIC SCHOOL
MEDICAL DESCRIPTIONS

DESCRIPTIONS ARE 15 DIGITS IN LENGTH

THERE ARE 30 DATA ITEMS THAT CAN BE 8 DIGITS IN LENGTH

ANYTOWN PUBLIC SCHOOL
MEDICAL DESCRIPTIONS

BIRTH CERTIF	YYXXXXXX	PHYSICAL DATE	MM-DD-YY
HEIGHT	YY-XX	WEIGHT	YY-XXX
DPT	X-MMDDYY	POLIO	X-MMDDYY
MEASLES	MM-DD-YY	RUBELLA	MM-DD-YY
MUMPS	MM-DD-YY	TB	A-MMDDYY
ALLERGY	IIIIIIII	ALLERGY	IIIIIIII
ALLERGY	IIIIIIII	OTHER PROBLEMS	IIIIIIII
DIABETES	AAA	EPILEPSY	AAA
MEDICATION	IIIIIIII		IIIIIIII
SCOLIOSIS	IIIIIIII	FINDINGS	IIIIIIII
VISION-R	YY-R-XXX	VISION-L	YY-L-XXX
GLASSES/CONTACT	A	HEARING-R	YY-R-AAA
HEARING-L	YY-L-AAA	HEAR-FOLLOW-UP	IIIIIIII
SPEECH	YY-AAA	LIONS CLUB	IIIIIIII
(Not Used)	IIIIIIII	NEEDS FOLLOW-UP	IIIIIIII

Exhibit C

MEDICAL CODES

DESCRIPTION	CODE (Max. 8 digits)	DEFINED
Birth Certificate	Year + #	(Don't use state codes) MC - Mother's copy HR - Hospital record O - Other None - No verification
Physical Date	mm-dd-yy	Month-Day-Year
Height	yy-xx	Year-Inches
Weight	yy-xxx	Year-Pounds
Polio	1 to 5 - mmddyy	Series number-Date
DPT	1 to 5 - mmddyy	Series number-Date
Measles	mm-dd-yy	
Rubella	mm-dd-yy	
Mumps	mm-dd-yy	
TB	N or P - mm-dd-yy	(N=Negative; P=Positive)
Allergy	(type) ex. Bees	
.		
.		
Vision - R	YY-R-XXX	Year-Right-20 to 200
Vision - L	YY-L-XXX	Year-Left-20 to 200
.		
.		
Lions Club	R-mmddyy	R (Referred)-month-day-year
Needs Follow-Up	(Indicate type or method)	

Note: Description can be up to 15 digits in length. there are 30 data items that can be up to an 8 digits code in length.

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